

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

November 20, 2003

TO: Internal File

FROM: Gregg A. Galecki, Reclamation Specialist/Hydrologist III

RE: Ditch Amendment, Andalex Resources Inc., Centennial Project Mine, C/007/0019, Task ID #1755

SUMMARY:

On October 20, 2003, the Division received a proposed amendment to eliminate disturbed area ditch DD-5 from the Mine Plan (MRP). The ditch is no longer functioning as designed, however the flow from the area is being transported in an alternate controlled manner. The proposed change has no impact to downstream culverts or hydrologic structures and requires no sizing modifications. Modifications have been made to tables and maps within the currently approved MRP to reflect the changes. The current technical review addresses the regulations solely germane to a hydrologic perspective. The proposed changes adequately address the minimum requirements of the regulations and incorporation into the currently approved MRP is recommended.

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TECHNICAL ANALYSIS:

OPERATION PLAN

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

Analysis:

Diversions: General

Ditch DD-5 was originally designed to convey runoff from an undisturbed area of approximately 6.2-acres into ditch DD-6 and ultimately into Sediment Pond E prior to leaving the mine site. Ditch DD-5 is at the base of a very rock steep slope and immediately adjacent to a paved road accessing the Administrative Office area of the mine. Maintenance of the ditch has been a problem due to colluvium coming off the steep slope. Sediment- and runoff- control is addressed by flow running through the colluvium located at the shoulder of the road or ‘washboarding’ over a portion of the road surface and reporting to ditch DD-6 either through the existing culvert or directly to the ditch.

The elimination of ditch DD-5 does not add any additional flow, sediment, or increased velocities of waters received from the area by ditch DD-6. Water that was initially designed to report totally to culvert CD-5 is now reporting between the culvert inlet, culvert outlet, and a small section of well-vegetated slope coming off the shoulder of the road. All of which is captured by ditch DD-6.

Modifications to the MRP include the elimination of ditch DD-5 from Table IV-3A, -3B, and -3C (Disturbed Diversion Design, Diversion Ditch Summary, and Disturbed Area Culvert Design Tables, respectively), located on pages 5-77, 5-78, and 5-81 of the MRP.

Findings:

The information provided in the application adequately addresses the minimum requirements of the Operation Plan - Hydrologic Information section of the regulations.

MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-512, -301-521, -301-542, -301-632, -301-731, -302-323.

Analysis:

Mining Facilities Maps

Included in the proposed changes are modifications to Plate 6 – As Constructed Surface Facilities Map and Plate 8 – Support Facilities Surface Area Drainage Map that eliminate the existence of ditch DD-5. No other mapping modifications were conducted and no other mapping modifications were requested by the Division.

Findings:

The information provided in the application adequately addresses the minimum requirements of the Operation Plan – Maps, Plans, and Cross Sections of Mining Operations section of the regulations.

Recommendations:

The application adequately addresses the minimum requirements of the regulations and can be incorporated into the currently approved MRP.